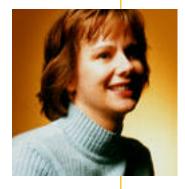## ASK talks with Joan Salute

APPL ASK

ASK: Often when people think about what is it that makes for a successful project manager (PM), they think,'Well, she should be able to do this, this, this, and this.' What they've got is a list of things. I understand once you decided to put together a list of qualifications for a project manager (PM), and your list turned out to be somewhat unconventional. Can you tell me about that?

Salute: The list was designed to help assign managers to new projects that came up at Ames. I was deputy division chief of a projects division, and we'd have principal investigators (PIs) coming by saying 'my proposal just got funded and I need a PM.' Our job was to get them a PM. If there was anything unconventional about what I was doing, it's that my list consisted of behavioral characteristics. Most lists start with things like writing a schedule, putting together a budget, writing a WBS. Those are the kinds of things you can learn in formal

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is the Associate Director of Aerospace at Ames Research Center. During her 19 years at NASA Ames, she has managed many NASA projects in a variety of technical areas. She has managed two flight projects to demonstrate the flight performance of ultra-high temperature thermal protection materials; projects to market and commercialize NASA developed technology; commercial applications of remote sensing projects including a project with Robert Mondavi Winery and a commercial potato grower; and remote sensing basic science research projects. Joan has an MBA degree in High Technology Management from Golden Gate University, and a B.S. in Mathematical Sciences from Purdue University. She is married and has a daughter who is a sophomore at USC. Joan's hobbies include running (she ran her first marathon in April) and cooking.

training or on the job, but they weren't what I thought was most important. What I was concerned about was what's the tacit knowledge you need. Things like trust, respect, doing whatever it takes to get things done, conveying the passion, being able to engender a team spirit.

ASK: Let's consider one of these behavioral characteristics. How about trust? How does that figure into how you would pair a PI with a PM?

Salute: Very often you can observe them together and tell whether they're mutually respectful of each other, or is one continuously trying to second guess the other. We've had PIs who basically don't believe anything a PM says. I can remember a case where the PI said openly to me that he did not trust the PM, and that did not change despite the best efforts of the PM to try and change it. Whether it's a credibility issue or it's based on their past experience together or whatever, there are some people who automatically trust another person and there are some people who put people through the ringer to earn their trust.

ASK: Don't you have to spend time with both parties?

Salute: Sometimes it's clear right off the bat, but in a lot of cases it's not, and the more time you can spend with each getting to know their personalities the better.

ASK: What do you consider the most important characteristic of a PM?

Salute: I don't know about the most important, but one of the things I feel strongly about is readjustment. You can have the best plan in the world, but if it doesn't work out your ability to readjust and recover probably has more value than your ability to plan it. For instance, at Ames one of our largest projects, a biological research project, is looking at up to a 70 percent budget cut next year (based on the current rumor mill). The majority of things they planned are (maybe) just not going to happen. I think those that prefer to 'stay the course' as a way of life, don't make good PMs.

ASK: When you came to NASA did you intend to pursue a career in management?

Salute: I had no specific career plan. I was doing science, remote sensing, and very happy at it. The only plan was to have a job in which I wasn't doing the same thing day in and day out. In that sense, I've been tremendously successful. Later on I got an MBA. By that point I felt like management was where I would be able to make the most contribution, not in science any longer, but this was years later.

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ASK: At what point then did you start seeing yourself as management material?

Salute: When I progressed from managing my own tasks to managing tasks where I didn't have the specific scientific knowledge in that field. That was a huge moment for me. I looked around the room and saw a bunch of other people like me—each of us had our own disciplines—and I asked myself why did I get chosen to manage their tasks. The reason, I believe, is because I was good at communicating between management and the scientists. They don't talk to each other very well sometimes. In particular, I could see the scientists trying to talk to management but not getting anywhere. And the scientists didn't appear to 'hear'(understand) messages from management. I was able to find some middle ground that was satisfactory to both sides. My division chief recognized this and began to give me opportunities to apply it on a broader scale.

ASK: It sounds like you have to be assertive in a situation like that.

Salute: I've learned to be assertive. Part of it is due to the fact that I was a single mother for several years. You grow up quickly that way, because of the responsibility you carry.

ASK: How have you matured as a manager?

Salute: I've learned a lot from observing other managers, by talking with them, and from my own experiences of course. The difference between how I

manage now and how I managed earlier in my career is that now I trust my gut more. An expert may tell me something and if I don't buy it I'm not afraid to call him on it. They may say, 'Don't worry, I've got it covered. You don't need to be worried about it.' My tendency is that when you hire someone as an expert in an area, you'd better let that person be the expert. But there are times when I've said to myself, 'What they're saying just doesn't add up,' and that's when I've brought in some other reviewers or went through it some more with other people until I felt right about it. On one flight project, there was a piece of electronics equipment that was the wrong capacity. 'It's only one out of three pieces that's not right,' the engineers said. "It's going to be fine, we don't have to replace it and compress the schedule." I'm sorry, but two out of three was just not good enough for me. Even though they were the electronics experts and were saying it was okay, we were not going to fly until that piece was replaced. They weren't happy about that because I was second-guessing their judgment. In the end, everyone was glad the part was replaced before flight, and it gave us the full range of data we needed.

ASK: One of the behavioral characteristics you said that's important in a manager is being able to engender a team spirit. How do you go about creating a team?

Salute: I've always believed this is a critical component of any project. People have told me I'm wrong, that all someone has to worry about is his or her little specific aspect of the project, but I don't believe that. I want people on a project to help each other and solve problems together, to 'buy into the whole' if you will. If the thermal expert is having a problem, sometimes you can still contribute to solving the problem even if you're not a thermal expert yourself. I don't want one of my team members sitting there saying she's got a problem but I'm not going there because that's not my problem. That kind of attitude doesn't help anyone feel like they're part of a team. I will actually have people sit down at a table and I'll go around asking each one, 'How would you solve this problem?' If we're just brainstorming, I won't accept as an answer 'I don't know.' If it's a procurement issue and somebody knows nothing about procurement, I can understand that they might be hesitant, but at least we're creating an understanding that this is about teamwork. It's so crucial that people understand that the team's goal takes precedence over any individual's goal. Otherwise those individual goals can pull the project in different directions.

> **"The difference between how I manage now and how I managed earlier in my career is that now I trust my gut more."**

ASK: What do you do to put people at ease when they don't have the expertise in a subject, say like in procurement, and are skittish about offering an opinion?

Salute: I tell them that they're smart people, and I value their opinion. We wouldn't have hired you on this project if we didn't believe that. And you don't just say this; you model it every day. It's always going to pay off for you in the

long run.

ASK: How about with the team? What can you do to engender a spirit of collective trust among team members?

Salute: Here's one example. I'm involved with mentoring a group of new employees at Ames. It's a year-long program and we're meeting five times together during the year for a day and a half each time. The first time we met we had a team start-up checklist we were using. One thing on the list that caught my eye was the question 'How might your weaknesses effect your contributions on this team?' Something I've learned while a PM is that trust among team members means being able to expose your vulnerabilities. Until you can do this and feel safe about it, you're hardly much of a team. Nobody wanted to deal with this question—obviously we weren't much of a team yet—so I started by telling them what I thought my own weaknesses were and how that could affect the outcome of the team. Each of them then shared a weakness. When we got through, we had moved three months on the 'bonding curve'in less than an hour. People were looking at each other like human beings who they cared about now. They even reported back to the people who were facilitating the group that it was amazing how quickly we cared about each other. Soon after you could see this, for instance, if one person got sick and was out of work we all rallied around that person to help out.

ASK: Is this something you learned during an experience where you were mentored yourself, or is it something you just know, as you said earlier, in your gut?

Salute: It gets back to what I was saying about the behavioral characteristics of a good PM. What makes people trust you? One thing is showing that you don't have it all figured out. Don't be afraid to admit that you don't know something. It just makes it so much easier for people to believe that you're for real. These are things you know how to do through your experience as a person, not because you've taken a management course. Although management courses have been useful to me, it's been a continuous process of learning through a variety of experiences, both life and work experiences.